

Amendment "B"

Amendments to the claims

Claim 23 has been amended and claims 24, 27-29 and 49 have been cancelled, without prejudice, as provided below:

Claim 1 (original). A media level measurement apparatus, comprising:

a sensor configured to provide a temperature signal corresponding to an ambient temperature;

a controller configured to provide a first signal and a second signal;

a source configured to provide an electrical current in response to the first signal;

a thermistor device electrically coupled to the source and configured to provide a level signal corresponding to a level of a media in contact with a lengthwise portion of the thermistor device during the electrical current; and

a signal processor configured to provide a media level signal in accordance with a comparison between the level signal and the temperature signal in response to the second signal.

Claim 2 (withdrawn). The apparatus of claim 1, and wherein the signal processor includes an analog-to-digital converter.

Claim 3 (original). The apparatus of claim 1, and wherein the media is an imaging media.

Claim 4 (original). The apparatus of claim 1, and wherein the source is further configured to provide a predefined pulse of electrical current in response to the first signal.

1 Claim 5 (withdrawn). The apparatus of claim 1, and wherein the thermistor device  
2 includes a thermal window defining the lengthwise portion of the thermistor device  
3 and configured to contact the media.

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5 Claim 6 (original). The apparatus of claim 1, and wherein the sensor and the  
6 thermistor device are defined by substantially equivalent temperature coefficients.

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8 Claim 7 (withdrawn). The apparatus of claim 1, and wherein the thermistor device is  
9 further configured such that the level signal includes a varying resolution  
10 corresponding to the level of the media in contact with the thermistor device.

11  
12 Claim 8 (original). The apparatus of claim 1, and wherein the thermistor device is  
13 configured to be supported such that the lengthwise portion extends along a majority  
14 of a depth wise dimension of a media reservoir.

15  
16 Claim 9 (original). The apparatus of claim 1, and wherein the controller is further  
17 configured to:

18 provide the first signal;

19 wait for predetermined period of time; and

20 provide the second signal after the predetermined period of time.

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22 (Continued on next page.)  
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1 Claim 10 (withdrawn). A level measurement apparatus, comprising:

2 a microcontroller including an executable program code and a plurality of  
3 lookup tables, each of the lookup tables including level data, the program code  
4 configured to cause the microcontroller to:

5 provide a trigger signal;

6 sense a level signal at a predetermined time after providing the trigger  
7 signal;

8 sense an ambient temperature signal;

9 cross-reference a particular one of the plurality of lookup tables  
10 corresponding to the ambient temperature signal;

11 cross-reference particular level data within the particular lookup table  
12 corresponding to the level signal; and

13 provide an imaging media level signal in accordance with the particular  
14 data.

15  
16 Claim 11 (withdrawn). The level measurement apparatus of claim 10, and further  
17 comprising an electrical source electrically coupled to the microcontroller and  
18 configured to provide a pulse of electrical current in response to the trigger signal.

19  
20 Claim 12 (withdrawn). The level measurement apparatus of claim 10, and further  
21 comprising a thermistor device electrically coupled to the microcontroller and  
22 configured to provide the level signal in correspondence to a level of an imaging  
23 media in contact with a lengthwise portion of the thermistor device during a pulse of  
24 electrical current applied to the thermistor device.  
25

1 Claim 13 (withdrawn). The level measurement apparatus of claim 12, and wherein  
2 the thermistor device is further configured to be supported such that the lengthwise  
3 portion extends along a majority of a depth-wise dimension of an imaging media  
4 reservoir.

5  
6 Claim 14 (withdrawn). The level measurement apparatus of claim 12, and wherein  
7 the thermistor is further configured such that the level signal includes a varying  
8 resolution corresponding to the level of the imaging media in contact with the  
9 thermistor device.

10  
11 Claim 15 (withdrawn). The level measurement apparatus of claim 10, and further  
12 comprising an ambient temperature sensor electrically coupled to the microcontroller  
13 and configured to provide the ambient temperature signal.

14  
15 Claim 16 (withdrawn). The level measurement apparatus of claim 10, and wherein  
16 each of the plurality of lookup tables includes a plurality of data records, each data  
17 record including:

18       a predetermined range of values of the level signal; and  
19       the level data representing an imaging media level corresponding to the  
20 predetermined range of values.

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22 (Continued on next page.)  
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1 Claim 17 (withdrawn). A media level measurement apparatus, comprising:  
2 a controller configured to provide a first signal and a second signal;  
3 a first current source and a second current source each configured to provide  
4 a pulse of electrical current in response to the first signal;  
5 a thermistor device electrically coupled to the first current source and  
6 configured to provide a level signal corresponding to a level of an imaging media in  
7 contact with a lengthwise portion of the thermistor device during the associated pulse  
8 of electrical current;  
9 a sensor electrically coupled to the second current source and configured to  
10 provide a temperature signal corresponding to an ambient temperature during the  
11 associated pulse of electrical current; and  
12 a signal processor configured to provide a media level signal in accordance  
13 with a comparison between the level signal and the temperature signal in response  
14 to the second signal.

15  
16 Claim 18 (withdrawn). The apparatus of claim 17, and wherein the sensor and the  
17 thermistor device are defined by substantially equivalent temperature coefficients.

18  
19 Claim 19 (withdrawn). The apparatus of claim 17, and wherein the first current  
20 source and the second current source and the thermistor device and the sensor are  
21 mutually electrically coupled to define a bridge circuit.

22  
23 Claim 20 (withdrawn). The apparatus of claim 17, and wherein the thermistor device  
24 is further configured such that the level signal includes a varying resolution  
25 corresponding to the level of the imaging media in contact with the thermistor device.

1 Claim 21 (withdrawn). The apparatus of claim 17, and wherein the thermistor device  
2 is further configured to be supported such that the lengthwise portion extends along  
3 a majority of a depth-wise dimension of an imaging media reservoir.

4  
5 Claim 22 (withdrawn). The apparatus of claim 17, and wherein the controller is  
6 further configured to:

7 provide the first signal;

8 wait for predetermined period of time; and

9 provide the second signal after the predetermined period of time.

10  
11 Claim 23 (Currently amended). An imaging apparatus configured to form images on  
12 a sheet media, comprising:

13 a reservoir configured to support an imaging media, the reservoir defining a  
14 depth-wise dimension;

15 a thermistor device configured to provide a level signal corresponding to a  
16 quantity of an imaging media within a majority of the depth-wise dimension of the  
17 reservoir; and

18 a controller coupled in signal communication with the thermistor device and  
19 configured to control at least one operation of the imaging apparatus in accordance  
20 with the level signal, wherein the controller is further configured to provide a level  
21 message corresponding to the level signal to a user computer.

22  
23 Claim 24 (Cancelled).

24  
25 Claim 25 (original). The imaging apparatus of claim 23, and wherein the thermistor  
device is further configured to provide the level signal in correspondence to a level of  
the imaging media in contact with a lengthwise portion of the thermistor device.

1 Claim 26 (withdrawn). The imaging apparatus of claim 25, and wherein the  
2 thermistor device includes a thermal window defining the lengthwise portion of the  
3 thermistor device and configured to contact the imaging media.

4  
5 Claims 27-29 (Cancelled).

6  
7 Claim 30 (withdrawn). The apparatus of claim 27, and wherein:

8 the thermistor device includes a thermal window defining a lengthwise portion  
9 of the thermistor device; and

10 the thermal window is configured to contact the imaging media within the  
11 majority of the depth-wise dimension of the reservoir.

12  
13 Claim 31 (withdrawn). The apparatus of claim 27, and wherein the thermistor device  
14 is further configured such that the level signal defines a varying resolution  
15 corresponding to the quantity of the imaging media within the majority of the depth-  
16 wise dimension of the reservoir.

17  
18 Claim 32 (withdrawn). A thermistor device, comprising:

19 a substrate; and

20 a thermistor material supported by the substrate, wherein the thermistor  
21 device is configured to provide an electrical resistance corresponding to a level of a  
22 media in contact with a lengthwise portion of the thermistor device.

23  
24 Claim 33 (withdrawn). The thermistor device of claim 32, and wherein the thermistor  
25 material substantially defines a strip including a lengthwise varying cross-sectional  
area.

1 Claim 34 (withdrawn). The thermistor device of claim 32, and wherein the thermistor  
2 material defines first and second substantially perpendicular lengthwise portions.

3  
4 Claim 35 (withdrawn). A thermistor device, comprising:

5 a plurality of discrete thermistors electrically coupled as a series circuit,  
6 wherein the thermistor device is configured to provide an electrical resistance  
7 corresponding to a level of a media in contact with a lengthwise portion of the  
8 thermistor device.

9  
10 Claim 36 (withdrawn). The thermistor device of claim 35, and wherein each of the  
11 discrete thermistors are defined by a respective temperature coefficient, and at least  
12 one of the temperature coefficients is substantially different than the other  
13 temperature coefficients.

14  
15 Claim 37 (withdrawn). A thermistor device, comprising:

16 a mandrel; and  
17 a thermistor wire defining a helix supported about a lengthwise portion of the  
18 mandrel, wherein the thermistor device is configured to provide an electrical  
19 resistance corresponding to a level of a media in contact with a lengthwise portion of  
20 the thermistor device.

21  
22 Claim 38 (withdrawn). The thermistor device of claim 37, and wherein the thermistor  
23 wire defines a helix defined by a varying pitch.

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1 Claim 39 (withdrawn). A thermistor device, comprising:

2 a substrate;

3 a thermally conductive material supported by the substrate; and

4 a thermistor thermally coupled to the thermally conductive material, wherein  
5 the thermistor device is configured to provide an electrical resistance corresponding  
6 to a level of a media in contact with a lengthwise portion of the thermistor device.

7  
8 Claim 40 (withdrawn). The thermistor device of claim 39, and wherein the thermally  
9 conductive material substantially defines a strip including a lengthwise varying cross-  
10 sectional area.

11  
12 Claim 41 (withdrawn). A thermistor device, comprising:

13 a thermal conductor defining a first end and a second end;

14 a heater thermally coupled to the thermal conductor proximate the first end  
15 and configured to provide heat in response to an applied electrical current; and

16 a thermistor coupled to the thermal conductor proximate the second end and  
17 configured to provide an electrical resistance corresponding to a level of a media in  
18 contact with a lengthwise portion of the thermistor device.

19  
20 Claim 42 (withdrawn). The thermistor device of claim 41, and wherein the heater is  
21 defined by another thermistor.

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23 (Continued on next page.)  
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1 Claim 43 (original). A method of measuring a media level, comprising:  
2 providing a thermistor device;  
3 supporting a lengthwise portion of the thermistor device in contact with the  
4 media;  
5 applying an electrical pulse to the thermistor device;  
6 waiting for a predetermined period of time;  
7 sensing a level signal from the thermistor device after the predetermined  
8 period of time;  
9 sensing an ambient temperature;  
10 comparing the ambient temperature to the level signal; and  
11 providing a media level signal in response thereto.

12  
13 Claim 44 (original). The method of claim 43, and wherein sensing the level signal  
14 from the thermistor device after the predetermined period of time occurs during a  
15 predetermined portion of the applied electrical pulse.

16  
17 Claim 45 (original). The method of claim 43, and wherein supporting the lengthwise  
18 portion of the thermistor device includes supporting the lengthwise portion of the  
19 thermistor device such that the lengthwise portion extends along a majority of a  
20 depth-wise dimension of a media reservoir.

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22 Claim 46 (original). The method of claim 43, and wherein the media is an imaging  
23 media.

24  
25 Claim 47 (original). The method of claim 43, and wherein sensing the level signal  
from the thermistor device after the predetermined period of time occurs after the  
applied electrical pulse.

1 Claim 48 (previously presented). A media level measurement apparatus,  
2 comprising:

3 means for sensing an ambient temperature;

4 means for providing a first signal and a second signal;

5 means for providing an electrical current in response to the first signal;

6 means for providing a level signal corresponding to a level of a media in  
7 response to the electrical current; and

8 means for providing a media level signal in accordance with a comparison  
9 between the level signal and the temperature signal in response to the second  
10 signal.

11  
12 Claim 49 (Cancelled).

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14 (End of Amendment "B".)  
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